



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/442,095	11/17/1999	CHONG-SAM CHUNG	1349.1016/GP	5416

21171 7590 06/11/2003

STAAS & HALSEY LLP  
700 11TH STREET, NW  
SUITE 500  
WASHINGTON, DC 20001

EXAMINER

PSITOS, ARISTOTELIS M

ART UNIT	PAPER NUMBER
----------	--------------

2653

DATE MAILED: 06/11/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n No.

09/442,095

Applicant(s)

CHUNG ET AL.

Examiner

Aristotelis M Psitos

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-17 and 20 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/5/03 has been entered.

***Specification***

The amendment to the title of the invention is greatly appreciated.

***Drawings***

The drawings are no longer objected to. Applicants' response has answered the examiners previous objection.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1,2,6,13,14,16,17,18 and 20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Maeda et al.

The following analysis is made:

Claim 1

Maeda et al

An optical pickup comprising:

See title

Art Unit: 2653

a first laser beam source generating a first laser beam; see col. 3, lines 8-12 & col. 4 lines

a second laser beam source generating a second laser <sup>13</sup> 10-18.

beam having a different wavelength than the first

laser beam;

an optical system projecting the first and second laser see col. 1, lines 45-68

beams to a signal layer of an optical disk and

transmitting the first and second laser beams as reflected

from the signal layer;

an optical detector detecting the first and second laser beams see element 10 in fig.2 ✓

transmitted from the optical system, the optical detector being

optimized with respect to the second laser beam; and

An optical converter converting the first laser beam transmitted element 11, holographic lens

from the optical system into the laser beam detectable by

the optical detector.

Under 102 considerations, the examiner concludes that as disclosed in Maeda et al at on col. 4 lines 10-13 two laser sources of different wavelengths are used and an optical system projects such beams onto a signal layer of the recording medium.

As disclosed in applicants' specification, the HOE performs the conversion function and the examiner interprets such a function to also be performed by the holographic lens in the Maeda et al system.

With respect to the optimization of the optical detector with respect to the second laser beam, the examiner interprets the photodetector element 10 to be optimized for both reproduced beams. The examiner reaches this conclusion due to the disclosure at col. 4 lines 3-9 of Maeda et al which discusses the ability of appropriately controlling the servo error/focus error. Hence, those of ordinary skill in the art use appropriate error detection for correcting such in order to improve the final signal output – i.e., optimize for the output.

Art Unit: 2653

Alternatively, if applicants can convince the examiner that such optimization is not inherently present in the Maeda et al document, and then the examiner would rely upon the acknowledged prior art for teaching the ability of appropriately controlling the servo/focus system accordingly to optimized the signal read out.

It would have been obvious to modify the base system of Maeda et al with the acknowledged prior art systems, motivation is to use well known techniques in order to yield a useable output signal – see In re Kotzab, 55 USPQ 1313.

With respect to claim 20, this claim is a substantial duplicate of claim 1, and hence the same analysis is made thereto.

With respect to claim 13, this claim also includes the appropriate driving section, signal processing section and controlling section. These sections are considered inherently present in the Maeda et al system – see the discussion with respect to the focus and servo-tracking abilities as mentioned above in col. 4. That information is read out of the system is also considered inherently present, i.e., the conventional end result of an optical pu unit in this environment is to provide appropriately reproduced information. Since this information needs to be subsequently processing in order to be interpreted by a user, if a signal processor is not inherently present in Maeda et al, then such would be obvious in order to reproduce the information contained on the disc.

With respect to method claim 18, such limitations are met when the above system is operated.

Furthermore, the examiner interprets the semiconductor lasers of Maeda et al as meeting the laser diode limitations of claims 2 and 14, and the photodetector element in Maeda et al is interpreted as meeting the photo diode detector limitation of claims 6 and 16.

Finally with respect to claim 17, applicants' attention is drawn to col. 3 lines 50-57 which discloses the ability of providing for a desired spot size of the reproduced signal. The examiner concludes that having similar or identical spot sizes is merely optimization of system parameters and obvious to those of ordinary skill in the art, see In re Peterson, 65 USPQ 1379.

Art Unit: 2653

***Response to Arguments***

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

5. Claims 1, 2, 6, 7, 13, 14, 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the acknowledged prior art (either figure 1 or 2 as submitted) further considered with Maeda et al.

The acknowledged prior art depicts an optical pu device with a single laser source.

The ability of having the two light beams focused/projected onto a single layer of an optical record in this environment is taught by Maeda et al. Although Maeda et al uses a converter – element 2 to provide for the second light source, alternative ability such as plural singular light sources, each set at difference wavelengths is also taught by Maeda et al – see col. 4 lines 4, lines 10-13. Additionally, the examiner interprets the photodetector in Maeda et al as a photodiode (claim 6). Also, Maeda et al uses a holographic lens in his system for its inherent use.

It would have been obvious to modify the reference of the acknowledged prior art with the additional teachings from Maeda et al to provide for separate laser light sources at difference wavelengths, motivation is to use equivalent abilities in order to provide for a dual wavelength optical pu device. Selection between alternative equivalent structures is a function of system criteria such as cost, availability, reliability, etc. routinely performed by those of ordinary skill in the arts.

With respect to independent claim 13, this requires three additional elements, a driving section, a signal processing section and a controlling section. The examiner considers these elements as well known in this environment – see the acknowledged prior art. Use of such for their inherent ability in yielding a useable output signal is considered motivation.

Dependent claims 14 and 16 are also rejected for the reasons stated with respect to claims 2 and 6 above.

***Response to Arguments***

Applicant's arguments filed 5/5/03 have been fully considered but they are not persuasive.

Art Unit: 2653

Maeda et al acknowledges the equivalence of having plural laser sources as opposed to a single laser source for different wavelengths, see col. 4 lines 10-13. The selection of one equivalent over another is considered a selection/substitution of equivalent elements and predicated on such matters as reliability, cost, availability, serviceability, etc. These are considerations/matters that those of ordinary skill in the art weight in designing systems, and the examiner concludes are matters implicitly known to those of ordinary skill in the art – see *In re Kotzab supra*.

6. Claims 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 1 as stated in paragraphs 4 and 5 above, and further in view of either Brazas et al or Yoo et al.

With respect to independent claim 12, in addition to the elements of claim 1, it includes a collimating lens for each laser source as well as a prism in the optical system.

Claim 15 recites a second collimating lens, e.g. one for each laser light source. The language associated with each collimating lens is considered functional description and inherently present with the collimating len(s).

The ability of providing for two collimating lenses, one for each laser light source and prism element in an optical arrangement in this environment is further taught by either the Yoo et al or Brazas et al documents, note the description of the acknowledged prior art therein. The use of collimating lenses for their inherent ability is well known. Use of separate light paths for each single light source provides for better optical isolation as well as increasing overall reliability of a system, i.e., the reliability or mean time between failure of system components increases with parallel signal lines. Hence either the above references to either Yoo et al or Brazas et al disclose such alternative optical signal paths, and It would have been obvious to modify the base systems as stated above in either paragraph 4 or 5 with the above dual light path, motivation is to increase system reliability.

***Response to Arguments***

Applicant's arguments filed 5/5/03 have been fully considered but they are not persuasive for the reasons stated above.

7. Claims 7- 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 1 as stated in paragraphs 4 or 5 above, and further in view of Kajiyama et al.

With respect to claims 7 –11, Kajiyama et al teaches these in the holographic lens environment, see figures 7 – 9 for instance.

It would have been obvious to modify the references as relied above and modify them with the above holographic lens teachings from Kajiyama et al, motivation is to provide for an appropriate holographic lens to project the light beams onto the record medium. Use of existing elements save valuable resources such as time, i.e., not requiring recreating system components already used in the environment.

With respect to claim 17, because Maeda et al discloses the ability of designating spot sizes – see col. 3 lines 50-57; the examiner considers the limitations of claim 17 to be merely optimization of appropriate holographic lens pattern. Different lens patterns are discussed in the secondary reference to Kajiyama et al and motivation is to optimize the spot sizes – see *In re Peterson, 65 USPQ 1379*.

***Response to Arguments***

Applicant's arguments filed 9/26/02 have been fully considered but they are not persuasive. The examiner concludes that the substitution of the HOE from Maeda et al with that further taught by the Kajiyama et al HOE arrangement would be obvious to one of ordinary skill in the art in order to obtain the appropriate spot sizes desired by the system designer.

Kajiyama et al is concerned with a dual wavelength light source in this environment and uses the particular HOE lens pattern of his figure 7 in order to achieve proper signal separation for the two selected laser beams, this is the reasons with respect to claims 8-11.



Art Unit: 2653

**Conclusion**

**Allowable Subject Matter**

Claims 3-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Broome et al – single objective lens for cd and DVDs.

Any inquiries concerning missing papers/references, etc. must be directed to Group 2600 Customer Services at (703) 306-0377.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (703) 305-6137. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Aristotelis M Psitos  
Primary Examiner  
Art Unit 2653



AMP  
June 10, 2003